

application of this theory, for instance, to memory, sequence of thought, association of ideas, and even more complex mental processes, is evident, but the limits of this paper have forbidden any but a mere mention of them.

EXTRAUTERINE FETATION.

REPORT OF FIFTEEN CASES TREATED BY OPERATION.

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WITHIN the past four years the following fifteen cases of extrauterine fœtation have been operated on by me at the Presbyterian Hospital. The admission of so many cases to the service of one surgeon in a general hospital must indicate that an ectopic pregnancy is a comparatively common occurrence. From the histories which follow certain facts have been derived. The youngest patient was twenty-three years of age, the oldest thirty-nine. Three were nulliparæ. Twelve had previously been normally pregnant, nine having borne one or more children, three having had miscarriages only. Five had complained of more or less pelvic pain prior to the ectopic gestation; ten gave no history of special distress in their pelvic organs.

Symptoms during the ectopic pregnancy. All had suffered from pain. In three the pain had been slight, in twelve severe. All had skipped one or more menstrual periods. In fourteen there had been irregular uterine bleeding; in one there was no history of bloody vaginal discharge. In eight there had been signs of shock on one or more occasions indicating rupture, in two of these amounting to severe collapse. In seven there had been apparently no sign of shock. Seven had considered themselves pregnant; eight had not suspected the existence of pregnancy.

Conditions found at operation. In two cases the fœtus was in the tube, which was unruptured (eight weeks and ten weeks). In five rupture into the broad ligament had occurred (less than three months). In eight the fœtus or its remains was found in the peritoneal cavity. The duration of the pregnancy was under fourteen weeks in thirteen cases, over four months in two cases (four and a half and six and a half months).

It may be well to note that most of these patients were from the lower grades of life and would not be apt to pay special attention to either their menstrual dates or their signs of pregnancy, and perhaps not to pain unless it was severe in character.

It will be noticed from a review of the above symptoms that these cases emphasize the fact that the main points in the diagnosis of extrauterine pregnancy are, first, delay of the menstrual period, with or

without signs of pregnancy ; second, pain generally severe in character and sudden in its onset, sometimes agonizing, with signs of shock ; third, irregular uterine hemorrhage very commonly accompanying the first attack of pain.

Case X. is of special interest on account of the viability of the child, which was fairly robust for a six and one-half months' fœtus. As both the head and extremities were deformed, an incubator was not employed. The history of this case is also of interest because of the frequent and severe attacks of hemorrhage in the cavity of the peritoneum. The placenta was removed at the operation instead of being left *in situ*, as is the usual custom.

Case XII. is of interest on account of the time selected for operation and the large amount of blood found in the abdomen. Laparotomy was done thirty-six hours after the gravest of three hemorrhages. Had the abdomen been opened on her admission to the hospital she would certainly have died on the operating-table. A delay of twenty-four hours enabled the patient to recover sufficiently to withstand the immediate shock of operation. Her depleted state was, however, unable to withstand the poison absorbed from the blood which was necessarily left in the abdominal cavity, and she succumbed on the fifth day. This was the only fatal case.

Case XIV. is of interest on account of three successive ruptures of the fetal sac, as is shown by the history of the case and by the conditions found at operation. The first rupture, that of the Fallopian tube, occurred presumably between the fifth and sixth weeks. Its contents apparently escaped into the broad ligament and a large blood-clot was left in the tube. The second rupture occurred about two weeks later. It was of the broad ligament, and resulted in a large hæmatocele in the floor of the pelvis, which evidently became sacculated. This was also accompanied by severe pain and by a uterine hemorrhage. The third rupture occurred about the tenth or eleventh week and evidently was of the sac of the hæmatocele, and resulted in either a fresh hemorrhage or an escape of the already clotted blood into the free peritoneal cavity. The conditions found at the operation, consisting of an enlarged Fallopian tube, in the end of which was a cavity in which the fœtus had formed, the distended broad ligament showing a tear in its superior layer, the hæmatocele in Douglas's pouch with a rent in its fragile sac, and the free blood in the peritoneal cavity, form a chain which beautifully illustrates the history of the three ruptures, each one of which was accompanied by pain and "flow."

CASE I.—Mrs. D., aged thirty-seven years ; married ; one miscarriage, six years ago ; no children. Menstruation regular and painless. Last normal menstruation November 1, 1891. Considered herself pregnant until January 27, 1892, when she thought she had a miscarriage, as

there was sudden uterine hemorrhage lasting some days, accompanied by pain, and followed by severe "colic" which continued two or three days. From February 5th until February 20th felt well, but was then attacked with another "colic" and with vomiting. In a few days these symptoms disappeared, but there remained a continuous pelvic pain. A week later another "colic," and again in another week. Admitted to the hospital on March 14th: Temperature 100°; pulse 92. There had been no vaginal discharge since February 1st. Complained of general abdominal discomfort and enlargement. On examination, to the right of the uterus was a mass the size of a foetal head. Diagnosis—probable extrauterine pregnancy, which had ruptured.

Operation, March 16th. Ether. Median laparotomy. Omentum found tightly adherent to superior surface of tumor and to intestines; ligated in three portions and cut away. Tumor then seen to occupy right iliac fossa and to be adherent to uterus, intestines, and floor of pelvis. It consisted of a thin sac, which was situated in the general cavity of the peritoneum. It was filled with blood-serum, and in it was a four and a half months' foetus, cord, and placenta. Sac was ruptured; contents removed with moderate loss of blood. Sac peeled from its attachments with ease. The distended and thickened Fallopian tube ligated and removed. The abdomen closed by suture. The patient made a good recovery, was out of bed April 12th, and discharged cured April 20th.

CASE II.—M. H., aged twenty-seven years; married five years; no children; one miscarriage (second month) four years ago. With the exception of the abortion, never suffered from pelvic pain until present illness. Menstruation always regular and painless. Last normal menstruation March 11, 1892. April 10th, menstrual molimina for two days, but no flow; noticed fullness of breasts and occasional nausea. May 7th, colicky pain in abdomen, which became localized into a constant pain, or rather a sense of discomfort, in the left iliac fossa. May 10th, when an examination was made a mass the size of a large orange, somewhat soft to the touch and slightly sensitive to pressure, was felt in the left of the uterus; uterus seemed enlarged and soft. Diagnosis of probable extrauterine foetation.

Operation, May 12th. Chloroform. Median laparotomy. To the left of the uterus and adherent to it was found a mass the size of an orange, which evidently contained fluid and blood-clots. On separating it from the adhesions it was seen to be a distended Fallopian tube. Partial rupture with the escape of some bloody serum occurred in extirpating the tube, which was clamped close to the uterus. Clamp was replaced by a ligature, and after cleansing of the pelvis the abdominal wound was closed. In the sac was found a shrunken foetus seven to eight weeks old. The temperature of the patient did not rise above 99.5°, and she was out of bed on the nineteenth day, and was discharged cured on June 7th.

CASE III.—C. P., aged thirty years; married ten years; four children, last four years ago. Menstruation had been regular. For the past four years had suffered from dysmenorrhœa and pain in the right side. Last normal menstruation in the middle of August, 1892. At the next menstrual period, September 15th, the flow was profuse and continued more or less until her admission to the hospital on November 1st. During these six weeks she suffered from abdominal pain, frequently severe in character, and from fever every afternoon and evening. No suspicion of pregnancy. On admission morning temperature averaged 99°; evening

temperature 101°. Uterus was enlarged and attached to its right side, and posterior to it was a tumor the size of a cocoanut. Diagnosis of probable extrauterine pregnancy.

Operation, November 4th. Ether. In a preliminary examination of the patient by bimanual palpation for diagnostic purposes the tumor was felt to rupture and disappear. This rupture confirmed the diagnosis, as but slight force had been employed. Patient placed in Trendelenburg position and the abdomen opened by a median incision. In the right broad ligament and escaping from it through a tear in its posterior wall were found fluid and clotted blood sufficient to fill a ten-ounce measure, and there were also shreds of tissue which afterward on microscopical examination were found to contain chorionic villi. The right Fallopian tube was enlarged and thickened, and with the ovary was removed. After careful sponging of the cavity the peritoneal cavity was irrigated with salt-solution, a strip of iodoform-gauze inserted for drainage, and the abdomen closed. Recovery was uncomplicated. The gauze was removed on the fifth day. The patient was out of bed on the twenty-fifth day and was discharged cured December 8th.

CASE IV.—O. G., aged thirty years; married ten years; three children, last fifteen months ago. Menstruation had been regular and free from pain. Last normal menstruation in beginning of September, 1892. After skipping period about October 1st, she considered herself pregnant and was "treated" by a midwife, the result after the second local treatment being severe pelvic pain and a slight bloody vaginal discharge. This continued, together with a feeling of discomfort referred to the rectum, from October 15th until November 14, 1892, when she was admitted to the hospital. On examination a mass the size of an orange was found behind and to the left of the uterus. No tenderness on palpation. Diagnosis—pyosalpinx or extrauterine pregnancy.

Operation, November 15th. Ether. Median laparotomy. Mass was situated in left broad ligament, and was found to consist of a blood-clot and shreds of organized tissue. Left tube much enlarged and adherent to the sac, which, with the left tube and ovary, was removed. Abdomen irrigated and closed by suture, a strip of gauze being inserted for drainage. The patient was out of bed at the middle of the fourth week and was discharged cured December 25th. Fœtal villi found on microscopical examination.

CASE V.—R. I., aged thirty-three years; married; five children; three miscarriages. Menstruation regular and no complaint of pain until present illness. Last normal menstruation October 11, 1892. Skipped period in November; breasts swollen; suspected pregnancy. December 13th, severe cramp-like pains in right side, followed by expulsion of large clots from vagina. Patient remained in bed; had fever, and flow continued. Admitted to the hospital December 19th, complaining of severe pain in right side; temperature 101.5°; pulse 100. On examination a doughy, tender mass the size of a fist felt to the right of the uterus, which was immovable. Diagnosis—pyosalpinx or extrauterine pregnancy.

Operation, December 12th. Chloroform. Median laparotomy. Mass to right of uterus proved to be a distended Fallopian tube adherent to intestines and uterus. In separating it from the adhesions the tube ruptured and gave exit to an ounce or two of dark grumous blood and some organized tissue, which on microscopical examination was found to contain chorionic villi. Tube extirpated with ovary. Left tube found

to contain a few drops of pus, also removed. A strip of iodoform-gauze inserted behind right broad ligament and brought out through abdominal wound, the remainder of which was closed. December 27th, gauze removed, rather foul. January 20th, patient out of bed. Sinus healed slowly and did not close until April 1st, but patient was discharged from hospital on February 10th.

CASE VI.—R. Z., aged thirty years; married six years; one child; seven miscarriages. Had been curetted several times. Four years before suffered from an attack of pelvic peritonitis, which followed a severe uterine hemorrhage. Since that time menstruation regular and no complaint of pain until present illness. August 15, 1893, another severe hemorrhage, and again followed by the use of the curette; in bed for a few days, but back at work in a week. Felt comparatively well until September 12th, when she was seized with severe pain in right iliac region, followed by a chill, fever, and sweating. These symptoms continued until September 30th, when she was admitted to the hospital; temperature 101.5°; pulse 114. Complained of pain and tenderness in right iliac region. Uterus retroverted and immovable. In right broad ligament a fluctuating tumor the size of a large orange; a smaller one on the left. Diagnosis—extrauterine pregnancy. October 1st to 10th, temperature ranged between 100° and 102°. From the 10th to the 17th it remained normal. From the 18th to the 26th it ranged between 99.5° and 100.5°. Constant pain in right side.

Operation, October 26th. Chloroform. Trendelenburg position. Median laparotomy. To left of uterus a mass the size of a cocoanut found firmly adherent to uterus, to walls of pelvis, and to intestines, and which apparently consisted of a distended broad ligament. Rupture occurred in separating the adhesions and eight ounces of offensive bloody fluid escaped. Left Fallopian tube enlarged, and, with the ovary, removed, two clamps being left on the pedicles. Cavity cleansed, packed with gauze, and abdominal wound partly closed. Considerable shock followed, but patient rapidly rallied. November 2d, packing removed; convalescence uninterrupted. November 20th, out of bed. December 2d, discharged cured.

CASE VII.—E. B., aged twenty-three years; married two years; never pregnant. Menstruation always painful and rather irregular. Since marriage more or less sense of discomfort in right inguinal region. During the spring and summer of 1893 continuous pain in this region. August, 1893, on examination I found a mass to right of uterus and adherent to it the size of a billiard-ball and very sensitive. Last regular menstruation in end of July. September 15th, slight bloody vaginal discharge; mass increasing in size. November 1st, pain more severe; mass larger, very tender; occasional "flow;" breasts tender; some vomiting. Diagnosis of intra-ligamentous cyst, and operation advised. Patient losing flesh and strength rapidly; no fever. For the next two weeks pain and tenderness increased and general condition worse. No further flow. Possibility of extrauterine pregnancy considered, but diagnosis inclined to tubercular salpingitis.

Operation, November 14, 1893. Chloroform. Trendelenburg posture. Median laparotomy. To the right of uterus spongy mass the size of a goose-egg, consisting of Fallopian tube, ovary, and broad ligament, surrounded by firmly adherent intestines. With considerable difficulty and much hemorrhage entire mass extirpated piecemeal, as it was so

brittle and so adherent. Many ligatures employed. Tampon of gauze placed in the cavity from which the tumor had been removed. Abdomen partly closed. On examination mass consisted of enlarged and much-thickened tube, of part of broad ligament, and remains of foetal tissue. Considerable shock. Slow convalescence. Discharged December 17th, with deep, narrow sinus, which persisted for months.

CASE VIII.—J. M., aged thirty-one years; married; three children; one miscarriage; last child three years ago; miscarriage eleven months ago, followed by a curetting of uterus. With these exceptions no complaint of pelvic pain or history of disease in pelvic organs. Last regular menstruation January 10, 1894. Skipped period due on February 8th. Morning nausea and fullness of breasts. Considered herself pregnant. No pain and no flow until March 10th, when after a hard day's work felt severe colicky pain in right iliac region and noticed a slight show. Remained in bed twenty-four hours, when pain ceased, and again moved about the house, but complained of a sense of discomfort in the right side of pelvis. March 18th, another attack of pain, not very severe, and described as "tearing" in character; a slight bloody vaginal discharge accompanied the pain, and as these continued she consulted Dr. S. Graber, who made the diagnosis of extrauterine pregnancy and sent her into the hospital for operation. Admitted March 23d, temperature 99.5°; pulse 90; abdomen not distended and not tender except on deep pressure in right iliac region, where, on vaginal examination, was felt a boggy mass to the right of the uterus the size of an orange, and it seemed adherent.

Operation, March 24th. Chloroform. Trendelenburg position. Omentum adherent to fundus of uterus and to top of right broad ligament. Uterus enlarged, position good. In right broad ligament a semi-fluctuating mass the size of an orange, somewhat adherent to floor of pelvis and to small intestine. In endeavoring to enucleate this tumor it ruptured and gave exit to an ounce or two of semi-solid blood and a small oblong solid mass of organized tissue, which was afterward found by the microscope to contain chorionic villi and remnants of a fetus. The sac consisted of the layers of the broad ligament, with an enlarged and ruptured Fallopian tube forming the roof. The latter, with the ovary, was removed, the cavity carefully cleansed, the layers of the broad ligament sutured, and the abdomen closed. Convalescence uneventful. Out of bed on the twentieth day, and discharged cured on April 20th.

CASE IX.—A. S., aged twenty-eight years; married ten years; never pregnant. Menstruation normal, slight pain. Eight years before, mild attack of pelvic peritonitis. Since then six or eight similar attacks, the last one a year ago. Last normal menstruation February 15, 1894. Skipped period in March and considered herself pregnant. April 10th, severe cramp-like abdominal pain, especially in left inguinal region, followed by slight "flow." The pain increased in severity, the abdomen became very sensitive, and the flow continued. On April 18th she was admitted to the hospital. Temperature 99.5°; pulse 100. On examination a doughy mass, sensitive to pressure, was felt behind the uterus, which was crowded forward and to the right. Abdomen slightly tympanitic and tender. Diagnosis—probable extrauterine pregnancy.

Operation, April 20th. Chloroform. Trendelenburg position. Median laparotomy. To the left of uterus and behind it a mass the size of a duck's egg, adherent to floor of pelvis and to intestines. In separating

this a rupture took place and a blood-clot with some shreds of tissue escaped. The Fallopian tube was enlarged and adherent to the right wall and roof of the sac, which, with the tube and ovary, was removed. Several silk ligatures used. Cavity cleansed. Abdomen closed without drainage. Convalescence rapid. Out of bed on the twenty-first day, and discharged cured May 19th.

CASE X.—M. B., aged thirty-five years; married seven years; one child five years ago. No miscarriages. Menstruation has always been regular. Has complained of no pain in pelvic organs until present illness. Last normal menstruation in the middle of February, 1894. At next menstrual period, March 15th, the flow was very profuse and continued for twenty-five days and was accompanied by dull pain. This was followed by a foul vaginal discharge which continued until May 1st, when she was seized with a uterine hemorrhage and was taken to a hospital, where for ten days she suffered from frequent vomiting, severe abdominal pain, and tympanites. On May 12th there was sudden attack of severe pain in the right inguinal region, followed by vomiting and collapse. A foul vaginal discharge persisted, until June 1st, when, being somewhat improved, she was removed to her home. On July 9th she was admitted to the medical side of this hospital. Abdomen was swollen; she vomited frequently and suffered from more or less constant abdominal pain. On July 17th she was transferred to the surgical division for operation. Abdomen much distended, giving on palpation a feeling of irregular bogginess, especially to the right of the median line, where in the lumbar region could be felt a hard mass which proved to be a fœtus. Temperature 100.5°; pulse 100.

Operation. Chloroform. Abdomen opened by median incision. Omentum adhered to abdominal wall and to the agglutinated intestine beneath. On separating adhesion a large quantity of dark blood poured out, and the peritoneal cavity was found to contain an enormous quantity of blood, both in clots and fluid, certainly as much as could be contained in a two-quart measure. Clots were adherent to the intestines, and as they were removed considerable bleeding followed. The mass which occupied the right half of the abdomen was a fœtus, with its placenta apparently encysted among adherent intestines. The placenta was implanted partly on intestines and partly on the lower border of the liver. The head of the fœtus was pressed against the under surface of the liver. The hemorrhage following the separation of the agglutinated intestines was severe. The live fœtus was rapidly removed and the cord clamped. As there was no sign of cessation of the hemorrhage, which was venous and seemed to issue from all parts of the sac, the placenta was rapidly separated from its attachments and removed. This was accompanied by a tremendous hemorrhage, which was controlled by strong compression with gauze-pads, and by a few clamps which grasped the large veins. The right tube, enlarged and thickened, was removed. The abdomen was irrigated with hot water. Numerous gauze-strips were used as packing to control the bleeding, with the ends projecting through the abdominal wound, which was then partly closed. The loss of blood had been excessive and the shock was profound, but the patient rallied well, and at the end of forty-eight hours was in fairly good condition. The gauze was removed on the fifth day and the patient was out of bed at the end of the fourth week, and was discharged cured September 9th. The fœtus moved and breathed vigorously; it was apparently about six and one-half months old. The

head was deformed and both legs were crooked. It was not placed in an incubator, and died at the end of a few hours.

CASE XI.—K. K., aged thirty-two years; married eleven years. Never pregnant. With exception of an attack of pelvic pain five years before, no complaint of uterine or ovarian trouble until present illness. Last normal menstruation July 8, 1895. July 15th, seized with severe pain in pelvis which continued for two days. August 6th, bloody vaginal discharge for six days, accompanied by slight pain. August 20th, attack of severe pain and return of "flow." Pain and flow continued more or less constantly until her admission to hospital on September 12th. Pain described as cramp-like, mainly on right side. Temperature 100° to 100.5°; pulse 80 to 100. On examination moderate abdominal distention and a boggy, ill-defined mass was felt extending out of pelvis well above its brim and as high as the right anterior superior spine of ilium. Diagnosis—probable extrauterine pregnancy. Immediate operation advised, but refused. During following five days evening temperature ranged between 100° and 101°; pulse 100 to 120.

Operation, September 17th. Ether. Trendelenburg position. Median laparotomy. Intestines agglutinated to each other and to the mass, which, the size of an orange, occupied the right iliac fossa, and was attached to uterus and floor of pelvis, and apparently consisted of a distended broad ligament to which were adherent an enlarged tube and right ovary. Sac ruptured; an ounce or two of bloody fluid escaped. Tube and ovary removed. Cavity cleansed and in it was placed a gauze-strip, the other end projecting through abdominal wound, the remainder of which was closed by suture. Convalescence uneventful. Gauze removed September 21st. Patient out of bed October 16th. Discharged cured October 26th.

Report of Dr. Thacher, pathologist, states: "The Fallopian tube presents a dilatation one inch in diameter near its centre. This sac has ruptured and is filled with a solid blood-clot. Microscopical examination: Villi of the chorion."

CASE XII.—D. S., aged thirty-seven years; married; three children. Last normal menstruation September 6, 1895, after which no sign of bloody vaginal discharge until the day of her admission to hospital, November 6, 1895. On October 25th she was seized with a severe attack of abdominal pain, chiefly located in the left iliac fossa, which was followed by leucorrhœa. On October 30th another sudden attack of pain, followed by syncope and vomiting. Great prostration and some abdominal pain and distention followed and continued until the morning of November 6th, when she was seized with a third attack, in which the pain was agonizing, the patient losing consciousness and continuing in a condition of collapse until her admission to the hospital in the evening of that day. In the ambulance during transfer to hospital she had several attacks of syncope in spite of active stimulation. On admission her radial pulse was almost imperceptible. Abdomen considerably distended and tender. By vagina the pelvis was found filled with a boggy mass. Diagnosis—ruptured ectopic gestation. Collapse, however, was so great that operation was for the present out of the question, as she would surely have died on the operating-table. During the night she rallied somewhat and on the next afternoon her condition was such that a laparotomy was deemed justifiable, as further delay probably meant a fresh hemorrhage. Under ether-anæsthesia in Trendelenburg position, the abdomen was

rapidly opened. As soon as the peritoneum was nicked a spout of dark fluid blood spurted out, and on enlarging the opening it was found that the abdominal cavity was full of blood, both fluid and in clots. Two quarts at least of fluid blood were washed out and clots were removed in handfuls, certainly enough to fill another quart measure. After the greater bulk of blood had been removed patient was placed in Trendelenburg position, and to the left of the uterus was seen a mass as large as a small orange, consisting of an enlarged Fallopian tube, with a rupture in its wall, and a thin, semi-transparent empty sac, also ruptured. These were removed and clamps left on the pedicles. Peritoneal cavity washed out with gallons of hot salt-solution. Irrigation could, however, not be continued until the fluid ran out clear on account of the patient's condition. Gauze was packed into the left iliac fossa and a large glass drainage-tube placed in the pelvis, and the wound partially closed. The shock of the operation was great, but the patient rallied and on the following day was in fair condition, with a pulse of 140. There was a profuse discharge of bloody fluid through the tube. Temperature 99° to 101° .

November 8th. Temperature 100° to 101° ; pulse 135 to 140. Free discharge of bloody serum. Patient looks septic.

9th. Temperature 100° to 101.5° ; pulse 130. Gauze-packing removed. Some vomiting.

10th. Temperature 100.5° to 102° ; pulse 140. Several movements of bowels. Abdomen less distended.

11th. Temperature 100° to 102° ; pulse 140. Patient weaker. No vomiting. Bowels moved.

12th. Died. Cause, exhaustion and sapræmia.

The pathologist reported foetal villi in the specimens removed.

CASE XIII.—M. C., aged twenty-six years, married seven years; no children. One miscarriage at second month, three years ago, after which uterus was curetted. Since then regular menstruation and freedom from pain until present illness. Last normal menstruation August 15, 1895. At the time of next period, September 13th, sudden profuse hemorrhage lasting a day or two, and since then more or less constant bloody vaginal discharge. Cramp-like pains in the pelvis and occasional vomiting, which continued until her admission to the hospital on October 21st, when the temperature was 99.5° and pulse 120. Abdomen distended and very tender. Mass felt most prominent on the right side, extending out of the pelvis nearly as high as the umbilicus. Diagnosis—either extrauterine pregnancy or an abscess.

Operation, October 22d. Chloroform. Median laparotomy. Trendelenburg position. Bladder found adherent to the anterior surface of the tumor and to the agglutinated intestines as high up as the umbilicus. A catheter had been passed previously to the operation, but there remained more than a pint of urine in the bladder, which was opened before it could be separated from the mass, which separation was accomplished with considerable difficulty. Tumor as large as a cocoanut found to right of uterus, firmly adherent to broad ligament and to neighboring intestines. In separating this the sac ruptured and about eight ounces of bloody purulent-looking fluid escaped. Right Fallopian tube adherent to the sac and much enlarged, and near its centre was an old tear. It, with the ovary, was removed. On a loop of small intestine which had formed part of the sac-wall was a crater-like spot as large as a

silver dollar, evidently the site of the placenta. Cavity sponged out, a strip of gauze packed into it and the end brought out through abdominal wound, which with this exception was closed. Patient suffered from considerable shock, but rallied well. Gauze removed on fifth day, and a fecal discharge indicated the existence of a fistula, most probably from a slough at the site of the placenta. With this exception recovery was uninterrupted. Fistula rapidly contracted. Fecal material ceased to pass on November 25th. Patient out of bed December 2d. Discharged cured December 14th.

CASE XIV.—L. M., aged thirty-seven years; married; four children; one miscarriage. Last child two years ago. Menstruation had been regular and painless. No special complaint of pelvic pain until present illness. Last normal menstruation September 16, 1895. October 1st, complained for a few days of pain in left iliac fossa, not severe. Skipped menstruation which was due on October 14th. November 12th, after a slight fall felt severe cramp-like pains in left iliac region, and twenty-four hours later there was a sudden gush of blood from vagina. The pain continued for several days, and there was occasional vomiting. She suspected that she might be pregnant. November 13th, another attack of severe pain accompanied by a "flow," which latter continued more or less constantly until her admission to the hospital on December 13th. The pain continued for a few days, and afterward she was comparatively comfortable until December 7th, when she was again seized with severe pain and pregnant-vomiting. This continued until December 12th, when she was seen by Dr. Forbes Hawkes, who made the diagnosis of probable extrauterine foetation which had ruptured, and he advised immediate operation. Temperature 101.5°; pulse 110. On admission, December 13th, temperature 100°; pulse 98. On examination a boggy mass was felt in Douglas's pouch about the size of a foetal head. Just above and under the symphysis a solid mass the size of a hen's egg. Diagnosis—extrauterine foetation which had ruptured into abdominal cavity.

Operation, December 13th. Ether. Trendelenburg position. Median laparotomy. On opening peritoneum considerable blood, both fluid and clots, found in its cavity. Omentum adherent to pelvic mass, easily separated. In median line under symphysis pubis and projecting toward the left side, a firm tumor the size and shape of a short, thick sausage. To its left, apparently on top of broad ligament, a thin sac the size of a hen's egg. Uterus pushed over to right side of pelvis. In Douglas's pouch, surrounded by adherent intestines, a soft mass the size of two fists. The sausage-shaped tumor above the symphysis found to be a distended Fallopian tube (left). It was removed, two clamps being placed on pedicle. During this extirpation the sac to the left ruptured and an ounce or more of bloody fluid escaped. This sac apparently consisted of a distended portion of the left broad ligament and was afterward removed. The mass in Douglas's pouch consisted of black blood-clots enclosed in a fragile sac, through the wall of which some leakage had apparently occurred. The clots were scooped out by the hands. The table was then lowered and the abdominal cavity irrigated with gallons of hot salt-solution until it ran out comparatively clear. A large amount of blood was thus washed out. The pelvis was again elevated, the pedicle and a few bleeding points in broad ligament and omentum ligatured with catgut, one clamp remaining. A strip of gauze was packed into Douglas's

pouch and brought out through the abdominal wound, the upper half of which was closed by suture. On opening the tube it was found to be distended with a firm mass of clotted blood. The distal end was open and led into a cavity about the size and shape of the last two joints of one's index-finger, the walls of which were composed of solid blood-clots. Considerable shock followed, and on the following day condition of patient was serious. Temperature 103° ; pulse 130. Frequent vomiting.

December 15th. Temperature $102\frac{1}{2}^{\circ}$; pulse 120.

December 16th. Temperature $101\frac{1}{2}^{\circ}$; pulse 110. Gauze removed.

Convalescence uneventful. Out of bed January 12th. Discharged cured January 27th.

CASE XV.—A. B., aged thirty-nine years; married; two children; no miscarriages. Menstruation had been regular and painless, and no complaint of pelvic pain until present illness. Last regular menstruation December 20, 1895. Menstruation in January probably skipped. February 21st, menstrual flow appeared. February 22d, while sitting on a privy-seat was suddenly seized with severe abdominal cramps and vomiting, accompanied by profuse vaginal hemorrhage. Abdomen became swollen and tender, and cramps continued. There was some evening temperature, and vomiting was frequent. The vomiting, pain, and distention increased until March 26th, when she was seen by Dr. J. C. Jay, who made a diagnosis of peritonitis. I saw her on the same day, and we decided that her condition would not justify an operation. Vomiting was constant; pulse 130; temperature 103° ; no movement of bowels for five days. Probable diagnosis—ruptured extrauterine foetation. Abdomen very sensitive, but by vaginal examination could be felt a boggy mass filling the pelvis and extending upward to near the umbilicus. Under Dr. Jay's care gradual improvement until April 25th, when he deemed a laparotomy justifiable. The mass extended well out of the pelvis and on the right side above the anterior superior spine of ilium. Pulse 110; temperature 100° to $100\frac{1}{2}^{\circ}$; stomach very irritable.

Operation. Chloroform. Median incision below umbilicus. Peritoneum incised superior to mass, which was shut off from general peritoneal cavity by adherent intestines, and was adherent to anterior abdominal wall. Peritoneum closed by suture, and incision extended downward. Bladder adherent to anterior surface of tumor, pushed downward. Under peritoneum blackish-green mass. Peritoneum opened and large quantity of dark blood, fluid and in clots, poured out. Hand scooped out clots and a three months' fetus, with cord and placenta, which was easily separated. Total amount more than two quarts. The cavity, the roof of which was formed of agglutinated intestines, was irrigated and drained with tube and gauze. During the first week there was much vomiting and development of urinary suprapubic fistula. Otherwise convalescence was uneventful. Discharged cured June 16th.